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Underground / Surface Winter Alert Bulletin

To: All District Supervisors, Analysts and Instructors
From: Franklin Reed, Director, Safety Analysis, Training and Certification
Date: November 22, 2006
RE: Winter Alert

UNDERGROUND MINING

In years past many miners have lost their lives due to mine fires and explosions. During the winter months the potential for fires and explosions intensifies. When cold dry air enters the mine the environment inside the mine dries out. Decreasing temperatures and fluctuating barometric pressure causes methane to become more prevalent. Coal dust dries out and methane escapes into the active areas of the mine from behind sealed areas and from abandoned works. The explosive range of methane is 5% to 15% and when coal dust is present in the mine atmosphere the possibility of an explosion is greatly increased.

Following are a few significant safety precautions that need special attention during the winter months.

- ◆ Cold dry air entering the mine affects the mine roof, causing the strata above the coal seam to deteriorate. Roof falls happen more frequently when this occurs. Keep a constant check on the mine roof and correct any unsafe conditions.
- ◆ Pre-shift / on-shift and weekly examinations must be conducted as required and conditions must be recorded in the mine record book.
- ◆ Test for methane should be made more frequently than required by law.
- ◆ Adequate ventilation and ventilation controls must be established throughout the mine in order to dilute and carry away methane concentrations.

- ◆ Areas around mine seals should be checked closely for the proper air flow, methane, and oxygen deficiency.
- ◆ Ventilation curtains on the working section must be maintained at all times to ensure that air is traveling its proper course and that gas and dust are being properly removed and diluted.
- ◆ Accumulations of loose coal and coal dust must be removed and all areas kept well rock dusted.
- ◆ Equipment water sprays must be maintained and in working order at all times.

SURFACE MINING

During the winter months the inherent dangers associated with surface mining also increase. Rain, freezing, thawing, mud, snow and ice are elements that have a direct affect on surface mining.

- ◆ Highwalls should be checked at the beginning of each shift and during the shift for unsafe conditions. Rain, freezing, thawing, mud, snow and ice have an adverse affect on vertical and horizontal cracks in the highwall. Water and moisture collects in these cracks and the potential for highwall failure is drastically increased.
- ◆ Spoil and fill areas should be examined for cracks, soft spots and bulges, especially after material has been frozen and begins to thaw. Unstable dump sites are more common during the winter. Freezing and thawing can cause soft spots and cracks therefore adding the weight of a truck or dozer could cause the slope to fail.
- ◆ Mobile equipment operators must be especially cautious. Potential hazards include slippery ladders and platforms. The majority of surface accidents during this time period are due to slip, trips, falls and back strains.
- ◆ Haulageways can become extremely dangerous. In emergency situations, drivers sometimes panic and jump from the vehicle. Many drivers have been killed by doing so. Stay in the truck. A driver has the best chance of survival if he resist the impulse to jump therefore his chance of survival is greatly increased if he keeps his seatbelt on and stays in the vehicle.

It is extremely important that both underground and surface mine safety analysts conduct quality safety meetings concerning these issues with all miners at their assigned mines. Instructors also need to place extra emphasis on these issues during your classroom instructions to the miners. Caution miners to stay focused on safe work habits during the holidays. Let's continue to protect the coal industries number one resources, THE MINER.

Accidents are preventable we simply fail to prevent them.

